

Permit No. NM0020389

**PROPOSED
PERMIT**

AUTHORIZATION TO DISCHARGE UNDER THE
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provisions of the Clean Water Act, as amended,
(33 U.S.C... 1251 et. seq; the "Act"),

Homestake Mining Company
P.O. Box 98
Grants, New Mexico 87020

is authorized to discharge from a facility located at Homestake Mining
Company, McKinley County, New Mexico


to receiving waters named Arroyo del Puerto to San Mateo Creek in the
Rio Grande Basin

in accordance with effluent limitations, monitoring requirements and
other conditions set forth in Parts I (5 pages), II (7 pages), and
III (6 pages) hereof.

This permit shall become effective on

This permit and the authorization to discharge shall expire at midnight,

Signed and issued this day of


Myron O. Knudson, P.E.

Director

Water Management Division (6W)

PART I
REQUIREMENTS FOR NPDES PERMITS

SECTION A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

OUTFALL 001

During the period beginning the effective date and lasting through the expiration date, the permittee is authorized to discharge from Outfall 001 - mine water.

Such discharges shall be limited and monitored by the permittee as specified below:

<u>Effluent Characteristic</u>	<u>Discharge Limitations</u>			
	<u>Mass(lbs/day)</u>		<u>Other Units (Specify)</u>	
	<u>Daily Avg</u>	<u>Daily Max</u>	<u>Daily Avg</u>	<u>Daily Max</u>
Flow (MGD)	N/A	N/A	(*1)	(*1)
Total Suspended Solids	N/A	N/A	20 mg/l	30 mg/l
Chemical Oxygen Demand	N/A	N/A	100 mg/l	200 mg/l (*2)
Radium 226 (dissolved)	N/A	N/A	3 pCi/l	10 pCi/l
Total Radium 226	N/A	N/A	10 pCi/l	30 pCi/l
Total Uranium	N/A	N/A	2.0 mg/l	4.0 mg/l
Total Zinc	N/A	N/A	0.5 mg/l	1.0 mg/l
Biomonitoring	N/A	N/A	N/A	N/A

<u>Effluent Characteristic</u>	<u>Monitoring Requirements</u>	
	<u>Measurement Frequency</u>	<u>Sample Type</u>
Flow (MGD)	Continuous	Record
Total Suspended Solids	1/week	24-hr. composite
Chemical Oxygen Demand	1/week	24-hr. composite
Radium 226 (dissolved)	1/week	24-hr. composite
Total Radium 226	1/week	24-hr. composite
Total Uranium	1/week	24-hr. composite
Total Zinc	1/week	24-hr. composite
Biomonitoring	1/month	(*3)

OUTFALL 001

The pH shall not be less than 6.6 standard units nor greater than 8.6 standard units and shall be monitored 1/week by grab sample.

There shall be no discharge of floating solids or visible foam in other than trace amounts.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): At the discharge pipe from the ion exchange plant.

Latitude: 35° 39' 20"

Longitude: 108° 30' 28"

FOOTNOTES

- (*1) Report.
- (*2) See Part II, Paragraph C.
- (*3) See Part II, Paragraph E.

SECTION B. SCHEDULE OF COMPLIANCE

The permittee shall achieve compliance with the effluent limitations specified for discharges in accordance with the following schedule:

NONE

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than 14 days following each schedule date. Any reports of noncompliance shall include the cause of noncompliance, any remedial actions taken, and the probability of meeting the next scheduled requirement.

10-11-1941

10-11-1941

UNITED STATES OF AMERICA

with a view to the establishment of a permanent
and effective system of international law

The United States of America, in order to
secure the peace and stability of the world,
and to promote the welfare of the human race,
do hereby declare that the principles of
international law, as set forth in the
Declaration of the United Nations, are
the basis of the international system.

SECTION C. REPORTING OF MONITORING RESULTS

Monitoring results shall be reported in accordance with the provisions of Part III.D.4 of the permit. Monitoring results obtained during the previous month shall be summarized and reported on a Discharge Monitoring Report form postmarked no later than the _____ day of the month following the completed reporting period. The first report is due on _____.

Figure 1. The effect of the concentration of the Fe^{2+} ions on the rate of the reaction of the Fe^{2+} ions with the H_2O_2 in the presence of the Fe^{3+} ions. The concentration of the H_2O_2 was 1.0×10^{-2} mol/L, the concentration of the Fe^{3+} ions was 1.0×10^{-2} mol/L, and the concentration of the Fe^{2+} ions was 1.0×10^{-3} mol/L.

1. *Chlorophyll a* (Chl *a*)
 2. *Chlorophyll b* (Chl *b*)
 3. *Chlorophyll c* (Chl *c*)
 4. *Chlorophyll d* (Chl *d*)
 5. *Chlorophyll e* (Chl *e*)
 6. *Chlorophyll f* (Chl *f*)
 7. *Chlorophyll g* (Chl *g*)
 8. *Chlorophyll h* (Chl *h*)
 9. *Chlorophyll i* (Chl *i*)
 10. *Chlorophyll j* (Chl *j*)
 11. *Chlorophyll k* (Chl *k*)
 12. *Chlorophyll l* (Chl *l*)
 13. *Chlorophyll m* (Chl *m*)
 14. *Chlorophyll n* (Chl *n*)
 15. *Chlorophyll o* (Chl *o*)
 16. *Chlorophyll p* (Chl *p*)
 17. *Chlorophyll q* (Chl *q*)
 18. *Chlorophyll r* (Chl *r*)
 19. *Chlorophyll s* (Chl *s*)
 20. *Chlorophyll t* (Chl *t*)
 21. *Chlorophyll u* (Chl *u*)
 22. *Chlorophyll v* (Chl *v*)
 23. *Chlorophyll w* (Chl *w*)
 24. *Chlorophyll x* (Chl *x*)
 25. *Chlorophyll y* (Chl *y*)
 26. *Chlorophyll z* (Chl *z*)
 27. *Chlorophyll aa* (Chl *aa*)
 28. *Chlorophyll ab* (Chl *ab*)
 29. *Chlorophyll ac* (Chl *ac*)
 30. *Chlorophyll ad* (Chl *ad*)
 31. *Chlorophyll ae* (Chl *ae*)
 32. *Chlorophyll af* (Chl *af*)
 33. *Chlorophyll ag* (Chl *ag*)
 34. *Chlorophyll ah* (Chl *ah*)
 35. *Chlorophyll ai* (Chl *ai*)
 36. *Chlorophyll aj* (Chl *aj*)
 37. *Chlorophyll ak* (Chl *ak*)
 38. *Chlorophyll al* (Chl *al*)
 39. *Chlorophyll am* (Chl *am*)
 40. *Chlorophyll an* (Chl *an*)
 41. *Chlorophyll ao* (Chl *ao*)
 42. *Chlorophyll ap* (Chl *ap*)
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 45. *Chlorophyll as* (Chl *as*)
 46. *Chlorophyll at* (Chl *at*)
 47. *Chlorophyll au* (Chl *au*)
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 49. *Chlorophyll aw* (Chl *aw*)
 50. *Chlorophyll ax* (Chl *ax*)
 51. *Chlorophyll ay* (Chl *ay*)
 52. *Chlorophyll az* (Chl *az*)
 53. *Chlorophyll aza* (Chl *aza*)
 54. *Chlorophyll abz* (Chl *abz*)
 55. *Chlorophyll acz* (Chl *acz*)
 56. *Chlorophyll adz* (Chl *adz*)
 57. *Chlorophyll aez* (Chl *aez*)
 58. *Chlorophyll afz* (Chl *afz*)
 59. *Chlorophyll agz* (Chl *agz*)
 60. *Chlorophyll ahz* (Chl *ahz*)
 61. *Chlorophyll aiz* (Chl *aiz*)
 62. *Chlorophyll ajz* (Chl *ajz*)
 63. *Chlorophyll akz* (Chl *akz*)
 64. *Chlorophyll alz* (Chl *alz*)
 65. *Chlorophyll amz* (Chl *amz*)
 66. *Chlorophyll anz* (Chl *anz*)
 67. *Chlorophyll aoz* (Chl *aoz*)
 68. *Chlorophyll apz* (Chl *apz*)
 69. *Chlorophyll aqz* (Chl *aqz*)
 70. *Chlorophyll arz* (Chl *arz*)
 71. *Chlorophyll asz* (Chl *asz*)
 72. *Chlorophyll atz* (Chl *atz*)
 73. *Chlorophyll auz* (Chl *auz*)
 74. *Chlorophyll avz* (Chl *avz*)
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 78. *Chlorophyll ayz* (Chl *ayz*)
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 80. *Chlorophyll azaa* (Chl *aza*)
 81. *Chlorophyll abz* (Chl *abz*)
 82. *Chlorophyll acz* (Chl *acz*)
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 88. *Chlorophyll aiz* (Chl *aiz*)
 89. *Chlorophyll ajz* (Chl *ajz*)
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 92. *Chlorophyll amz* (Chl *amz*)
 93. *Chlorophyll anz* (Chl *anz*)
 94. *Chlorophyll aoz* (Chl *aoz*)
 95. *Chlorophyll apz* (Chl *apz*)
 96. *Chlorophyll aqz* (Chl *aqz*)
 97. *Chlorophyll arz* (Chl *arz*)
 98. *Chlorophyll asz* (Chl *asz*)
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 100. *Chlorophyll auz* (Chl *auz*)
 101. *Chlorophyll avz* (Chl *avz*)
 102. *Chlorophyll awz* (Chl *awz*)
 103. *Chlorophyll axz* (Chl *axz*)
 104. *Chlorophyll ayz* (Chl *ayz*)
 105. *Chlorophyll ayz* (Chl *ayz*)
 106. *Chlorophyll azz* (Chl *azz*)
 107. *Chlorophyll azaa* (Chl *aza*)
 108. *Chlorophyll abz* (Chl *abz*)
 109. *Chlorophyll acz* (Chl *acz*)
 110. *Chlorophyll adz* (Chl *adz*)
 111. *Chlorophyll aez* (Chl *aez*)
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 114. *Chlorophyll ahz* (Chl *ahz*)
 115. *Chlorophyll aiz* (Chl *aiz*)
 116. *Chlorophyll ajz* (Chl *ajz*)
 117. *Chlorophyll akz* (Chl *akz*)
 118. *Chlorophyll alz* (Chl *alz*)
 119. *Chlorophyll amz* (Chl *amz*)
 120. *Chlorophyll anz* (Chl *anz*)
 121. *Chlorophyll aoz* (Chl *aoz*)
 122. *Chlorophyll apz* (Chl *apz*)
 123. *Chlorophyll aqz* (Chl *aqz*)
 124. *Chlorophyll arz* (Chl *arz*)
 125. *Chlorophyll asz* (Chl *asz*)
 126. *Chlorophyll atz* (Chl *atz*)
 127. *Chlorophyll auz* (Chl *auz*)
 128. *Chlorophyll avz* (Chl *avz*)
 129. *Chlorophyll awz* (Chl *awz*)
 130. *Chlorophyll axz* (Chl *axz*)
 131. *Chlorophyll ayz* (Chl *ayz*)
 132. *Chlorophyll ayz* (Chl *ayz*)
 133.

1. The first step in the process of identifying a potential threat is to conduct a thorough review of the information available. This includes examining the threat's history, its current status, and the potential impact it could have on the organization. The review should also take into account the threat's location, the time of day, and the weather conditions.

PART II
OTHER CONDITIONS

A. The term "24-hour composite sample" except for volatile organics means a sample consisting of a minimum of eight (8) grab samples of effluents collected at regular intervals over a normal operation day and combined proportional to flow, or a sample continuously collected proportional to flow over a normal operating day.

B. Test Procedures

a. The effluent characteristics "soluble radium 226" and "total radium 226" shall be measured by Method 706 "Radium 226 in Water" in accordance with the procedures discussed for soluble radium 226 and total radium 226 in Standard Methods for the Examination of Water and Wastewater, 14th Edition, 1975, page 667, or an equivalent method.

b. The effluent characteristic "total uranium" shall be measured by the procedure discussed in the HASL Procedural Manual, edition by John H. Harley, HASL 300 Health and Safety Laboratory, U.S. Atomic Energy Commission, 1973, page EU-03, or an equivalent method.

C. The following limitations shall apply

Part 2, of New Mexico Water Quality Control Commission Regulations, September 20, 1982, Section 2-101, General Requirements: number 2 in subsection A which reads more than one daily composite sample in any thirty-day period (in which less than (10) daily composite samples are examined)" the Chemical Oxygen Demand (COD) shall be less than 125 mg/l.

D. The following limitations shall apply

Part 2, of New Mexico Water Quality Control Commission Regulations, September 20, 1982, Section 2-101, General Requirements: number 2 in subsection A which reads "more than one daily composite sample in any thirty-day period (in which less than ten (10) daily composite samples are examined)" the Bio-Chemical Oxygen Demand (BOD) shall be less than 30 mg/l.

E. CHRONIC BIOMONITORING REQUIREMENTS

a. The permittee shall test the effluent for toxicity in accordance with the provisions in this section. Such testing will determine if an appropriately dilute effluent sample affects the survival and reproduction

CONFIDENTIAL

11 JAN 1977

1. The purpose of this document is to provide information regarding the status of the project. The project is currently in the planning stage and is expected to be completed by the end of the year.

2. The project is being managed by the following individuals:

3. The project is being funded by the following organizations:

4. The project is being implemented by the following organizations:

5. The project is being monitored by the following organizations:

6. The project is being evaluated by the following organizations:

7. The project is being reported on by the following organizations:

8. The project is being reviewed by the following organizations:

9. The project is being approved by the following organizations:

10. The project is being implemented by the following organizations:

or growth of the appropriate test organism. The permittee shall initiate the following series of tests within 60 days after recommencing discharge to evaluate wastewater toxicity. All test organisms, procedures, and water quality assurance criterion used shall be in accordance with the latest revision of "Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms", EPA/600/4-85/014. The following tests shall be used:

- 1) The permittee shall conduct a 7-day Ceriodaphnia dubia survival and reproduction test (Method 1002.0).
- 2) The permittee shall conduct a 7-day fathead minnow (Pimephales promelas) larval survival and growth test (Method 1000.0).

b. A minimum of 5 dilutions must be performed in addition to an appropriate control, using a minimum dilution factor of 0.3 (i.e., 100%, 30%, 10%, 3%, and 1%).

c. The samples shall be collected at a point following the last treatment unit. Dilution water used in toxicity tests will be receiving stream water collected at a point upstream of the discharge. If receiving water is unsatisfactory as a result of pre-existing in-stream toxicity (greater than 20% mortality in the control), the permittee must substitute reconstituted dilution water, with hardness and alkalinity similar to that of the receiving stream water. The permittee shall also report to EPA the toxicity of the upstream receiving water.

d. Flow-weighted 24-hour composite samples representative of dry weather flows during normal operation will be collected from Outfall 001. These composites shall be combined in proportion to the average flow from each outfall for the day the sample was collected. The toxicity tests shall be performed on the flow-weighted composite of the outfall samples.

e. The toxicity tests specified in paragraphs (a) and (b) above shall be conducted once per month. The permittee shall prepare a full report of the results according to EPA/600/4-85/014, Section 10, Report Preparation. This full report need not be submitted unless requested and shall be retained following the provisions of Part III.C.3 of this permit.

f. The permittee shall submit the toxicity testing information contained in Table 1 of this permit to EPA along with the Discharge Monitoring Report (DMR) submitted for the end of the reporting period following the toxicity test.

2. The fact that the defendant is a member of the Communist Party of the United States of America, and that he is a member of the National Student Reliance Fund, is a material fact in the case, and the defendant is guilty of the crime charged in the indictment.

[illegible][illegible]

1. The "General" is a collection of 100 letters and 100 poems, all of which are written in the "General" style. The letters are written in the "General" style, and the poems are written in the "General" style. The "General" is a collection of 100 letters and 100 poems, all of which are written in the "General" style. The letters are written in the "General" style, and the poems are written in the "General" style.

[illegible]

g. Should no toxicity occur within the first year of toxicity testing, in accordance with Paragraph (h) below, for both species tested at the effluent dilution equivalent to low flow (100%), the permittee shall certify this information in writing to EPA Region VI and these biomonitoring requirements shall expire.

h. For the purpose of this biomonitoring requirement, chronic toxicity is defined as a statistically significant difference at the 95% confidence level between the survival and growth or reproduction in the appropriate test organism exposed to the control and to an effluent dilution.

i. This permit shall be reopened to require further monitoring studies and/or effluent limits if biomonitoring data show actual or potential ambient toxicity to be the result of the permittee's discharge to the receiving stream. Modification or revocation of the permit is subject to the provisions of 40 CFR Part 122.62. Accelerated or intensified toxicity testing may be required in accordance with Section 308 of the Clean Water Act.

1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582, 2583, 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 2626, 2627, 2628, 2629, 2630, 2631, 2632, 2633, 2634, 2635, 2636, 2637, 2638, 2639, 2640, 2641, 2642, 2643, 2644, 2645, 2646, 2647, 2648, 2649, 2650, 2651, 2652, 2653, 2654, 2655, 2656, 2657, 2658, 2659, 2660, 2661, 2662, 2663, 2664, 2665, 2666, 2667, 2668, 2669, 2670, 2671, 2672, 2673, 2674, 2675, 2676, 2677, 2678, 26

1. The first step in the process of identifying a problem is to determine the nature of the problem. This involves a thorough understanding of the situation and the factors that may be contributing to the problem. Once the nature of the problem is understood, the next step is to identify the causes of the problem. This can be done by conducting a detailed analysis of the situation and the factors that may be contributing to the problem. Once the causes of the problem are identified, the next step is to develop a plan to address the problem. This plan should be based on the causes of the problem and should include specific actions that can be taken to address the problem. Finally, the plan should be implemented and the results should be monitored to ensure that the problem is resolved.

1. The Commission has received information from the Department of Health and Human Services (HHS) that the National Center for Human Genome Research (NCHGR) has been established. The NCHGR is a part of the National Institutes of Health (NIH) and is responsible for coordinating and supporting research on the human genome. The NCHGR is also responsible for providing information to the public about the human genome and its uses.

TABLE 1

BIOMONITORING REPORTING

CERIODAPHNIA DUBIA SURVIVAL AND REPRODUCTION TEST

Permittee: Homestake Mining Company
NPDES No.: NM0020389

Composite collected FROM: _____ am/pm _____ date
TO: _____ am/pm _____ date

Test initiated: _____ am/pm _____ date

Dilution water used: ☐ Receiving water ☐ Reconstituted water

NUMBER OF YOUNG PRODUCED PER FEMALE @ 7 DAYS

Percent effluent (%)

REP	0%	1%	3%	10%	30%	% at low flow 100%
A						
B						
C						
D						
E						
F						
G						
H						
I						
J						

[illegible]

1. $\frac{1}{2}$ 2. $\frac{1}{2}$ 3. $\frac{1}{2}$ 4. $\frac{1}{2}$ 5. $\frac{1}{2}$ 6. $\frac{1}{2}$ 7. $\frac{1}{2}$ 8. $\frac{1}{2}$ 9. $\frac{1}{2}$ 10. $\frac{1}{2}$

1. *Chlorophyll a* and *Chlorophyll b* were determined by the method of Arar and Collins (1971) using a Shimadzu 1601 UV-Visible Spectrophotometer.

[illegible][illegible][illegible]

TABLE 1 (Continued)

BIOMONITORING REPORTING

CERIODAPHNIA DUBIA SURVIVAL AND REPRODUCTION TEST

Permittee: Homestake Mining Company

NPDES No.: NM0020389

PERCENT SURVIVAL

Percent effluent (%)

Time of Reading	0%	1%	3%	10%	30%	% at low flow 100%
24h						
48h						
7-day						

1. Fisher's Exact Test:

Is the mean survival at 7 days significantly different ($p=0.05$) than the control survival for the % effluent corresponding to:

LOW FLOW: _____ YES _____ NO

2. Dunnett's Procedure or Steel's Many-One Rank Test as appropriate:

Is the mean number of young produced per female significantly different ($p=0.05$) than the control's number of young per female for the % effluent corresponding to:

LOW FLOW: _____ YES _____ NO

3. Enter percent effluent corresponding to each NOEL below and circle lowest number:

a. NOEL survival = _____ % effluent

b. NOEL reproduction = _____ % effluent

4. If you answered NO to 1 and 2, enter [N]; otherwise enter [Y]: _____

5. Enter response to item 4 on DMR Form, Parameter No. TCP3B.

THE UNIVERSITY OF CHICAGO

DEPARTMENT OF CHEMISTRY

PHYSICAL CHEMISTRY

LECTURE NOTES

BY

PROFESSOR

JOHN D. COLEMAN

CHICAGO, ILL.

1950

THE UNIVERSITY OF CHICAGO

DEPARTMENT OF CHEMISTRY

PHYSICAL CHEMISTRY

LECTURE NOTES

BY

PROFESSOR

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CHICAGO, ILL.

1950

TABLE 1 (Continued)

BIOMONITORING REPORTING

FATHEAD MINNOW LARVAE GROWTH AND SURVIVAL TEST
(Pimephales promelas)

Permittee: Homestake Mining Company
 NPDES No.: NM0020389

Composite collected FROM: _____ am/pm _____ date
 TO: _____ am/pm _____ date

Test initiated: _____ am/pm _____ date

Dilution water used: ☐ Receiving water ☐ Reconstituted water

DATA TABLE FOR GROWTH OF FATHEAD MINNOWS

Effluent Conc. (%)	Average Dry Weight in milligrams in replicate chambers				MEAN DRY WEIGHT	
	A	B	C	D	mg	CV%*
0%						
1%						
3%						
10%						
30%						
Low Flow 100%						

* coefficient of variation = standard deviation x 100/mean

1. Dunnett's Procedure:

Is the mean dry weight (growth) at 7 days effluent significantly different ($p=0.05$) than the control's dry weight (growth) for the % effluent corresponding to:

LOW FLOW: _____ YES _____ NO

1. *Chlorophyll a* and *Chlorophyll b* were determined by the method of Arar and Collins (1971) using a Shimadzu 1010 UV-Visible Spectrophotometer. The concentration of chlorophyll was expressed in $\mu\text{g mL}^{-1}$.

[illegible]

1. *General* 2. *General* 3. *General* 4. *General* 5. *General* 6. *General* 7. *General* 8. *General* 9. *General* 10. *General* 11. *General* 12. *General* 13. *General* 14. *General* 15. *General* 16. *General* 17. *General* 18. *General* 19. *General* 20. *General* 21. *General* 22. *General* 23. *General* 24. *General* 25. *General* 26. *General* 27. *General* 28. *General* 29. *General* 30. *General* 31. *General* 32. *General* 33. *General* 34. *General* 35. *General* 36. *General* 37. *General* 38. *General* 39. *General* 40. *General* 41. *General* 42. *General* 43. *General* 44. *General* 45. *General* 46. *General* 47. *General* 48. *General* 49. *General* 50. *General* 51. *General* 52. *General* 53. *General* 54. *General* 55. *General* 56. *General* 57. *General* 58. *General* 59. *General* 60. *General* 61. *General* 62. *General* 63. *General* 64. *General* 65. *General* 66. *General* 67. *General* 68. *General* 69. *General* 70. *General* 71. *General* 72. *General* 73. *General* 74. *General* 75. *General* 76. *General* 77. *General* 78. *General* 79. *General* 80. *General* 81. *General* 82. *General* 83. *General* 84. *General* 85. *General* 86. *General* 87. *General* 88. *General* 89. *General* 90. *General* 91. *General* 92. *General* 93. *General* 94. *General* 95. *General* 96. *General* 97. *General* 98. *General* 99. *General* 100. *General*

[illegible][illegible][illegible]

DATE _____ TIME _____

2000 1000 500 0

[illegible]

100

TABLE 1 (Continued)

BIOMONITORING REPORTING

FATHEAD MINNOW LARVAE GROWTH AND SURVIVAL TEST
(Pimephales promelas)

Permittee: Homestake Mining Company
 NPDES No.: NM0020389

DATA TABLE FOR FATHEAD MINNOW SURVIVAL

Effluent Conc. (%)	Percent Survival in replicate chambers				MEAN PERCENT SURVIVAL			CV%*
	A	B	C	D	24h	48h	7-day	
0%								
1%								
3%								
10%								
30%								
Low Flow 100%								

* coefficient of variation = standard deviation x 100/mean

2. Dunnett's Procedure or Steel's Many-One Rank Test as appropriate:

Is the mean survival at 7 days significantly different ($p=0.05$) than the control survival for the % effluent corresponding to:

LOW FLOW: _____ YES _____ NO

3. Enter percent effluent corresponding to each NOEL below and circle lowest number:

a. NOEL survival = _____ % effluent

b. NOEL growth = _____ % effluent

4. If you answered NO to 1 and 2, enter [N]; otherwise enter [Y]: _____

5. Enter response to item 4 on DMR Form, Parameter No. TCP6C.

2. *Effect of the number of trials*

Figure 1. The effect of the concentration of the *Agaricus bisporus* spores on the growth of *Agaricus bisporus* on the substrate. The concentration of the spores was 10⁴ (a), 10⁵ (b), 10⁶ (c), 10⁷ (d), 10⁸ (e) and 10⁹ (f) spores/g of substrate. The substrate was composed of 100 g of straw and 100 g of manure. The substrate was incubated for 14 days at 25 °C. The diameter of the mushroom was measured at the end of the incubation period. The diameter of the mushroom was measured at the end of the incubation period. The diameter of the mushroom was measured at the end of the incubation period.

Figure 1. The effect of the concentration of the *Agrobacterium* suspension on the transformation efficiency of *Agrobacterium* strains.

1. *Journal of the American Medical Association*, 1997; 277: 1033-1036.

[illegible]

www.mhhe.com/industrialmanagement

1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582, 2583, 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 2626, 2627, 2628, 2629, 2630, 2631, 2632, 2633, 2634, 2635, 2636, 2637, 2638, 2639, 2640, 2641, 2642, 2643, 2644, 2645, 2646, 2647, 2648, 2649, 2650, 2651, 2652, 2653, 2654, 2655, 2656, 2657, 2658, 2659, 2660, 2661, 2662, 2663, 2664, 2665, 2666, 2667, 2668, 2669, 2670, 2671, 2672, 2673, 2674, 2675, 2676, 2677, 2678, 2679, 26

1. *Journal of the American Medical Association*, 1997; 277: 1001-1005.

Abstract—The purpose of this study was to determine the effect of a 10-week training program on the heart rate (HR) and heart rate reserve (HRR) of sedentary middle-aged men. The subjects were divided into two groups: a control group and an exercise group. The exercise group performed a 10-week training program consisting of three sessions per week of aerobic exercise. The control group did not exercise. The HR and HRR were measured at rest and during exercise at the beginning and end of the 10-week period. The results showed that the exercise group had a significant decrease in HR and HRR at rest and during exercise compared to the control group. The control group had no significant change in HR and HRR. The results suggest that a 10-week training program can improve the cardiovascular fitness of sedentary middle-aged men.

$\frac{1}{2}$ $\frac{1}{3}$ $\frac{1}{6}$ $\frac{1}{18}$

1. *Chlorophyll a* and *Chlorophyll b* were determined by the method of Arar and Collins (1971) using a Shimadzu 1010 spectrophotometer. The concentration of chlorophylls was expressed as $\mu\text{g mL}^{-1}$ of the sample.

(1) $\frac{1}{2} \leq \alpha \leq 1$ and $\frac{1}{2} \leq \beta \leq 1$;

2007: 163

10. *What is the most important thing you have learned from this course?*

Figure 1. The effect of the concentration of the *Agrobacterium* suspension on the transformation efficiency of *Agrobacterium* strains. The *Agrobacterium* strains were grown in YEA medium for 24 h at 28 °C. The cell concentration was adjusted to 10⁸ cells/ml. The cells were then mixed with the plant tissue and incubated for 24 h at 28 °C. The plant tissue was then cultured on the selective medium. The transformation efficiency was determined as the number of transformants per 10⁶ cells. The data are the mean ± SD of three independent experiments.

: redacted name

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PART III
STANDARD CONDITIONS FOR NPDES PERMITS

SECTION A. GENERAL CONDITIONS

1. Introduction

In accordance with the provisions of 40 CFR Part 122.41, et. seq., this permit incorporates by reference ALL conditions and requirements applicable to NPDES Permits set forth in the Clean Water Act, as amended, (hereinafter known as the "Act") as well as ALL applicable CFR regulations.

2. Duty to Comply

The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.

3. Toxic Pollutants

a. Notwithstanding Part III.A.5, if any toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is promulgated under Section 307(a) of the Act for a toxic pollutant which is present in the discharge and that standard or prohibition is more stringent than any limitation on the pollutant in this permit, this permit shall be modified or revoked and reissued to conform to the toxic effluent standard or prohibition.

b. The permittee shall comply with effluent standards or prohibitions established under Section 307(a) of the Act for toxic pollutants within the time provided in the regulations that established those standards or prohibitions, even if the permit has not yet been modified to incorporate the requirement.

4. Duty to Reapply

If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and obtain a new permit. The application shall be submitted at least 180 days before the expiration date of this permit. The Director may grant permission to submit an application less than 180 days in advance but no later than the permit expiration date. Continuation of expiring permits shall be governed by regulations promulgated at 40 CFR Part 122.6 and any subsequent amendments.

5. Permit Flexibility

This permit may be modified, revoked and reissued, or terminated for cause in accordance with 40 CFR 122.62-64. The filing of a request for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.

6. Property Rights

This permit does not convey any property rights of any sort, or any exclusive privilege.

7. Duty to Provide Information

The permittee shall furnish to the Director, within a reasonable time, any information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The permittee shall also furnish to the Director, upon request, copies of records required to be kept by this permit.

8. Criminal and Civil Liability

Except as provided in permit conditions on "Bypassing" and "Upsets", nothing in this permit shall be construed to relieve the permittee from civil or criminal penalties for noncompliance. Any false or materially misleading representation or concealment of information required to be reported by the provisions of the permit, the Act or applicable CFR regulations which avoids or effectively defeats the regulatory purpose of the Permit may subject the Permittee to criminal enforcement pursuant to 18 U.S.C. Section 1001.

9. Oil and Hazardous Substance Liability

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject under Section 311 of the Act.

10. State Laws

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable State law or regulation under authority preserved by Section 510 of the Act.

11. Severability

The provisions of this permit are severable, and if any provision of this permit or the application of any provision of this permit to any circumstance is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

SECTION B. PROPER OPERATION AND MAINTENANCE

1. Need to Halt or Reduce not a Defense

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

2. Duty to Mitigate

The permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

3. Proper Operation and Maintenance

The permittee shall at all times properly operate and maintain

all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems which are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of the permit.

4. Bypass of Treatment Facilities

a. **Bypass not exceeding limitations.** The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of Parts III.B.4.b and 4.c.

b. Notice

(1) **Anticipated bypass.** If the permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible at least ten days before the date of the bypass.

(2) **Unanticipated bypass.** The permittee shall, within 24 hours, submit notice of an unanticipated bypass as required in Part III.D.7.

c. Prohibition of bypass

(1) Bypass is prohibited, and the Director may take enforcement action against a permittee for bypass, unless:

- (a) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
- (b) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and,

(c) The permittee submitted notices as required by Part III.B.4.b.

(2) The Director may approve an anticipated bypass, after considering its adverse effects, if the Director determines that it will meet the three conditions listed at Part III.B.4.c(1).

5. Upset Conditions

a. **Effect of an upset.** An upset constitutes an affirmative defense to an action brought for noncompliance with such technology-based permit effluent limitations if the requirements of Part III.B.5.b are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.

b. **Conditions necessary for a demonstration of upset.** A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:

- (1) An upset occurred and that the permittee can identify the cause(s) of the upset;
- (2) The permitted facility was at the time being properly operated;
- (3) The permittee submitted notice of the upset as required by Part III.D.7; and,
- (4) The permittee complied with any remedial measures required by Part III.B.2.

c. **Burden of proof.** In any enforcement proceeding the permittee seeking to establish the occurrence of an upset has the burden of proof.

6. Removed Substances

Solids, sludges, filter backwash, or other pollutants removed in the course of treatment or control of wastewaters shall be disposed of in a manner such as to prevent any pollutant from such materials from entering navigable waters.

SECTION C. MONITORING AND RECORDS

1. Inspection and Entry

The permittee shall allow the Director, or an authorized representative, upon the presentation of credentials and other documents as may be required by the law to:

- a. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;
- b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
- c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices or operations regulated or required under this permit; and
- d. Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Act, any substances or parameters at any location.

2. Representative Sampling

Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.

3. Retention of Records

The permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least 3 years from the date of the sample, measurement, report, or application. This period may be extended by request of the Director at any time.

4. Record Contents

Records of monitoring information shall include:

- a. The date, exact place, and time of sampling or measurements;
- b. The individual(s) who performed the sampling or measurements;
- c. The date(s) analyses were performed;
- d. The individual(s) who performed the analyses;
- e. The analytical techniques or methods used; and
- f. The results of such analyses.

5. Monitoring Procedures

Monitoring must be conducted according to test procedures approved under 40 CFR Part 136, unless other test procedures have been specified in this permit.

6. Flow Measurements

Appropriate flow measurement devices and methods consistent with accepted scientific practices shall be selected and used to ensure the accuracy and reliability of measurements of the volume of monitored discharges. The devices shall be installed, calibrated, and maintained to insure that the accuracy of the measurements are consistent with the accepted capability of that type of device. Devices selected shall be capable of measuring flows with a maximum deviation of less than a 10% from true discharge rates throughout the range of expected discharge volumes. Guidance in selection, installation, calibration, and operation of acceptable flow measurement devices can be obtained from the following references:

- a. "A Guide to Methods and Standards for the Measurement of Water Flow", U.S. Department of Commerce, National Bureau of Standards, NBS Special Publication 421, May 1975, 97 pp. (Available from the U.S. Government Printing Office, Washington, D.C. 20402. Order by SD Catalog No. C13.10:421).
- b. "Water Measurement Manual", U.S. Department of Interior, Bureau of Reclamation, Second Edition, Revised Reprint, 1974, 327 pp. (Available from the U.S. Government Printing Office, Washington, D.C. 20402. Order by Catalog No. 127.19/2:W29/2, Stock No. S/N24003-0027).
- c. "Flow Measurement in Open Channels and Closed Conduits", U.S. Department of Commerce, National Bureau of Standards, NBS Special Publication 484, October 1977, 982 pp. (Available in paper copy or microfiche from National Technical Information Service (NTIS), Springfield, VA 22151. Order by NTIS No. PB-273535/55T).
- d. "NPDES Compliance Sampling Manual", U.S. Environmental Protection Agency, Office of Water Enforcement, Publication MCD-51, 1977, 140 pp. (Available from the General Services Administration (GSA), Centralized Mailing Lists Services, Building 41, Denver Federal Center, Denver, CO 80225).

meet one of the criteria for determining whether a facility is a new source in 40 CFR Part 122.29(b); or,

- (2) The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit, nor to notification requirements under 40 CFR Part 122.42(a) (1).

b. Municipal Permits

Any change in the facility discharge (including the introduction of any new source or significant discharge or significant changes in the quantity or quality of existing discharges of pollutants) must be reported to the permitting authority. In no case are any new connections, increased flows, or significant changes in influent quality permitted that will cause violation of the effluent limitations specified herein.

2. Anticipated Noncompliance

The permittee shall give advance notice to the Director of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

3. Transfers

This permit is not transferable to any person except after notice to the Director. The Director may require modification or revocation and reissuance of the permit to change the name of the permittee and incorporate such other requirements as may be necessary under the Act.

4. Discharge Monitoring Reports

Monitoring results must be reported on Discharge Monitoring Report (DMR) Form EPA No. 3320-1 in accordance with the "General Instructions" provided on the form. The permittee shall submit the original DMR to the EPA with copies of the DMR to the State Agency. Duplicate copies of the DMRs, signed and certified as required by Part III.D. 11 and all other reports required by Part III.D shall be submitted to the Director and to the State (if applicable) at the following address(es):

Water Management Division
Enforcement Branch (6W-E)
U.S. Environmental Protection
Agency, Region VI
First Interstate Bank Tower
1445 Ross Avenue
Dallas, Texas 75202-2733

Oklahoma (Industrial Permits)
Director
Oklahoma Water Resources Board
P.O. Box 53585
Oklahoma City, Oklahoma 73152

SECTION D. REPORTING REQUIREMENTS

1. Planned Changes

a. Industrial Permits

The permittee shall give notice to the Director as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required only when:

- (1) The alteration or addition to a permitted facility may

New Mexico:

Program Manager
Surface Water Section
Surface Water Quality Bureau
New Mexico Environmental
Improvement Division
P.O. Box 968
Santa Fe, New Mexico 87504-0968

Louisiana:

Assistant Secretary for Water
Water Pollution Control
Division
Louisiana Department of
Environmental Quality
P.O. Box 44091
Baton Rouge, Louisiana 70804-4091

5. Additional Monitoring by the Permittee
If the permittee monitors any pollutant more frequently than required by this permit, using test procedures approved under 40 CFR Part 136 or as specified in this permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the Discharge Monitoring Report (DMR). Each increased monitoring frequency shall also be indicated on the DMR.
6. Averaging of Measurements
Calculations for all limitations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified by the Director in the permit.
7. Twenty-Four Hour Reporting
 - a. The permittee shall report any noncompliance which may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the permittee becomes aware of the circumstances. A written submission shall also be provided within 5 days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance. The Director may waive the written report on a case-by-case basis if the oral report has been received within 24 hours.
 - b. The following shall be included as information which must be reported within 24 hours:
 - (1) Any unanticipated bypass which exceeds any effluent limitation in the permit;
 - (2) Any upset which exceeds any effluent limitation in the permit; and,
 - (3) Violation of a maximum daily discharge limitation for any of the pollutants listed by the Director in Part II (Industrial permits only) of the permit to be reported within 24 hours.
8. Other Noncompliance
The permittee shall report all instances of noncompliance not reported under Parts III.D.4 and D.7 and Part I.B. (for Industrial permits only) at the time monitoring reports are submitted. The reports shall contain the information listed in Part III.D.7.
9. Other Information
Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Director, it shall promptly submit such facts or information.
10. Changes in Discharges of Toxic Substances (Applicable to Industrial Permits Only)
The permittee shall notify the Director as soon as it knows or has reason to believe:

- a. That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant which is not limited in the permit. If that discharge will exceed the highest of the "notification levels" described in 40 CFR Part 122.42(a) (1).
 - b. That any activity has occurred or will occur which would result in any discharge, on a non-routine or infrequent basis, of a toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the "notification levels" described in 40 CFR Part 122.42(a) (2).
11. Signature Requirements
- All applications, reports, or information submitted to the Director shall be signed and certified.
- a. All permit applications shall be signed as follows:
 - (1) For a corporation - by a responsible corporate officer. For the purpose of this section, a responsible corporate officer means:
 - (a) A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision making functions for the corporation; or,
 - (b) The manager of one or more manufacturing, production, or operating facilities employing more than 250 persons or having gross annual sales or expenditures exceeding \$25 million (in second-quarter 1980 dollars), if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.
 - (2) For a partnership or sole proprietorship - by a general partner or the proprietor, respectively.
 - (3) For a municipality, State, Federal, or other public agency - by either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a Federal agency includes:
 - (a) The chief executive officer of the agency, or
 - (b) A senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency.
 - b. All reports required by the permit and other information requested by the Director shall be signed by a person described above or by a duly authorized representative of that person. A person is a duly authorized representative only if:
 - (1) The authorization is made in writing by a person described above;
 - (2) The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, operator of a well or a well field, superintendent, or position of equivalent responsibility, or an individual or

position having overall responsibility for environmental matters for the company. A duly authorized representative may thus be either a named individual or an individual occupying a named position; and,

(3) The written authorization is submitted to the Director.

- c. **Certification.** Any person signing a document under this section shall make the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

12. Availability of Reports

Except for applications, effluent data, permits, and other data specified in 40 CFR 122.7, any information submitted pursuant to this permit may be claimed as confidential by the submitter. If no claim is made at the time of submission, information may be made available to the public without further notice.

SECTION E. PENALTIES FOR VIOLATIONS OF PERMIT CONDITIONS

1. Criminal

a. Negligent Violations

The Act provides that any person who negligently violates permit conditions implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Act is subject to a fine of not less than \$2,500 nor more than \$25,000 per day of violation, or by imprisonment for not more than 1 year, or both.

b. Knowing Violations

The Act provides that any person who knowingly violates permit conditions implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Act is subject to a fine of not less than \$5,000 nor more than \$50,000 per day of violation, or by imprisonment for not more than 3 years, or both.

c. Knowing Endangerment

The Act provides that any person who knowingly violates permit conditions implementing Sections 301, 302, 303, 306, 307, 308, 318, or 405 of the Act and who knows at that time that he is placing another person in imminent danger of death or serious bodily injury is subject to a fine of not more than \$250,000, or by imprisonment for not more than 15 years, or both.

d. False Statements

The Act provides that any person who knowingly makes any false material statement, representation, or certification in any application, record, report, plan, or other document filed or required to be maintained under the Act or who knowingly falsifies, tampers with, or renders inaccurate,

any monitoring device or method required to be maintained under the Act, shall upon conviction, be punished by a fine of not more than \$10,000, or by imprisonment for not more than 2 years, or by both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment shall be by a fine of not more than \$20,000 per day of violation, or by imprisonment of not more than 4 years, or by both. (See Section 309.c.4 of the Clean Water Act)

2. Civil Penalties

The Act provides that any person who violates a permit condition implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Act is subject to a civil penalty not to exceed \$25,000 per day for each violation.

3. Administrative Penalties

The Act provides that any person who violates a permit condition implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Act is subject to an administrative penalty, as follows:

a. Class I Penalty

Not to exceed \$10,000 per violation nor shall the maximum amount exceed \$25,000.

b. Class II Penalty

Not to exceed \$10,000 per day for each day during which the violation continues nor shall the maximum amount exceed \$125,000.

SECTION F. DEFINITIONS

All definitions contained in Section 502 of the Act shall apply to this permit and are incorporated herein by reference. Unless otherwise specified in this permit, additional definitions of words or phrases used in this permit are as follows:

1. "Act" means the Clean Water Act (33 U.S.C. 1251 et. seq.), as amended.
2. "Administrator" means the Administrator of the U.S. Environmental Protection Agency.
3. "Applicable effluent standards and limitations" means all state and Federal effluent standards and limitations to which a discharge is subject under the Act, including, but not limited to, effluent limitations, standards of performance, toxic effluent standards and prohibitions, and pretreatment standards.
4. "Applicable water quality standards" means all water quality standards to which a discharge is subject under the Act and which have been (a) approved or permitted to remain in effect by the Administrator following submission to him/her, pursuant to Section 303(a) of the Act, or (b) promulgated by the Administrator pursuant to Section 303(b) or 303(c) of the Act.
5. "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility.
6. "Daily Discharge" means the discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. For pollutants with limitations expressed in terms of mass, the "daily discharge" is calculated as the total mass of the pollutant

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